OBZHIROV, I.A., inzhener; LEYTES, A.V., inzhener.

Testing sheet parts for lamination. Vest.mash. 33 no.7:90 Jl '53. (MLRA 6:8)
(Metals--Testing) (Sheet metal)

TERTERYAN, A.A., inzh.; LEYTES, A.V., inzh.; MAKUSHIN, A.A., inzh.; VEDENYAPINA, I.I., inzh.

Effect of pressure of the traction rolls on continuous steel casting equipment on the quality of cast slabs. Stal' 21 no.10: 901-902 O '61. (MIRA 14:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i zavod "Krasnoye Sormovo".
(Continuous casting)

S/133/62/000/001/002/010
A054/A127

AUTHORS: Lapotyshkin, N. M., Boychenko, M. S., Candidates of Technical Sciences, Leytes, A. V., Akimova, Ye. I., Slivchanskaya, V. V., Engineers

TITLE: Special features of crystallization in continuous casting

PERIODICAL: Stal', no. 1, 1962, 30 - 33

TEXT: There is no definite opinion concerning the effect of the crystallization rate on the grain structure and chemical composition of continuous castings. To solve this problem, tests were carried out at the TsNIIChM and a new method was applied to determine the crystallization rate, which is based on the distance between the dendrite axes: when the solidification rate is increased, the interaxial distance between secondary dendrites decreases. The tests were carried out with carbon steel and transformer steel. To obtain a clear picture of the dendritic structure, the carbon steels were water-hardened at 950 - 1,050°C and annealed (in water) at 650°C. The crystallization rate at various depths was also checked by introducing the radioactive isotope of sulfur ($S^{35}$), for "45" and Ст .3 (St.3) steels, poured at a 0.7 m/min rate in crystallizers, 200 x 200 mm

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and 175 x 420 mm size. The St.3 steel was partly poured in a stationary 175 x 420 mm crystallizer and partly by bottom pouring, into conventional molds (180 x 560 and 300 x 300 mm in size). The metal temperature prior to pouring was 1,560 - 1,570°C, the pouring rate in the continuous equipment: 0.7 m/min and in the standard molds: 0.4 - 0.6 m/min. The macrostructural tests showed that the zone of acicular dendrites was about twice that of the ingots obtained in the standard mold. The density of the dendrite zone in continuous casting was also higher than in the standard ones. By measuring the interaxial distance between dendrites it was found that the solidification rate in continuous castings was about 30% higher than in the standard molds. The difference was most striking in a 10 - 50 mm thick layer under the surface of the casting. The surface-to-vlume ratio also affects the solidification rate: the 300 x 300 mm ingots solidify slower than the 180 x 560 mm ingots. The interaxial distance of secondary dendrites in carbon steel and transformer steel ingots first increased steadily, upon approximating the axial zone of the ingot, then decreased slightly due to the change in the ratio of the solidifying surface to the volume of the still liquid metal. Other factors of continuous casting (the carbon content of the steel and its temperature in 200 x 200 mm ingots, the rate of pouring and the intensity of second-

Special features of...

ary cooling) were also studied. In these tests, 4 heats of "45" steel and У 7 (U7) steel were investigated. The increase in temperature during the pouring of U7 steel slightly reduced the crystallization rate. An increase in the pouring rate (from 0.5 to 0.7 m/min) decreased the solidification rate by about 0.3 cm/min. As to the intensity of secondary cooling, it was established that if 2 l/sec cooling water (0.5 l per 1 kg steel) were consumed, the solidification rate somewhat increased, while upon raising the water consumption to 5 l/sec, this had no effect on the average solidification rate. The relation between the crystallization rate in the cross section of the ingot, the structure and the distribution of nonmetallic inclusions was studied in 200 x 200 mm continuous castings. The distribution of inclusions depended in the first place on the arrangement of structural zones. The smallest amount of inclusions was found in the fine-grained zone of the skin, while the amount of inclusions increased in the zone of acicular grains and still more in the transient zone between acicular and spheroidal grains. Dendritic liquation was studied in continuous and standard castings of transformer steel with 4.2 - 4.4% Si content, by comparing the microhardness of the dendrite axes and of the interaxial zones. Greater hardness was observed for the interaxial zones than for the axial parts. The differences in $\Delta H_B$ indicated the degree of dendritic liquation, which was higher for the standard castings than

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for the continuous ones. The $\Delta H_B$ values gradually decreased starting from a depth of 60 mm below the surface to the central sections. In continuous castings, therefore, the dendritic non-homogeneity was lower than in the standard castings. There are 3 figures and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc. The reference to the English-language publication reads as follows: D. M. Lewis, I. Savage, Metallurgical Reviews, 1956, v. 1, pt. 1.

RUTES, V.S.; NIKOLAYEV, N.A.; LEYTES, A.V.

Controlling the formation of longitudinal hot cracks on the surface of continuous ingots. Stal' 22 no.2:122-124 F '62. (MIRA 15:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Steel ingots--Defects)
(Continuous casting)

AKIMOVA, Ye.I.; LAPOTYSHKIN, N.M.; LEYTES, A.V.

Determining the crystallization front by the distance between dendrite axes. Sbor. trud. TSNIICHM no.32:72-74 '63. (MIRA 16:12)

GLAZKOV, P.G., inzh.; GRIGOR'YEV, F.N., inzh.; MURZOV, K.[illegible], inzh.; SLADKOSHTEYEV, V.T., inzh.; Prinimali uchastiye: MALAKHA, A.V.; POKRASS, L.M.; DRUZHININ, I.I.; OSIPOV, V.G.; KONDRATYUK, A.M.; POLYAKOV, I.V.; GORDIYENKO, M.S.; PAVLOV, M.T.; KOPYTIN, A.V.; PARASHCHENKO, R.A.; POTANIN, R.V.; AKHTYRSKIY, V.I.; BRUK, S.M.; YEVTUSHENKO, V.V.; LEYTES, A.V.; STRELETS, V.M.

Continuous casting of 140-ton steel heats with four-channel equipment. Stal' 22 no. 6:501-504 Je '62. (MIRA 16:7)

S/191/60/000/010/015/017
B004/B060

AUTHORS: Perlin, S. M., Gil'man, T. P., Leytes, A. Z.

TITLE: Study of the Completeness of Hardening of Unsaturated Polyester Resins by the Dilatometric Method

PERIODICAL: Plasticheskiye massy, 1960, No. 10, pp. 64-68

TEXT: The authors studied the hardening degree of ПН-1 (PN-1) resin by the use of different initiators and catalysts. The previously performed tests for Rockwell heat, bending strength, and water absorption showed that no clear knowledge can be obtained concerning the hardening on the basis of physicomechanical tests. An investigation was therefore conducted with a Schevenaar differential dilatometer of the firm Amsler. Dilatation curves displayed breaks with insufficient hardening of the resin. The following optimum values were obtained for the addition of initiator and catalyst: 3% cumene hydroperoxide (initiator) and 6-8% cobalt naphthenate (catalyst). At 1.5% benzoyl peroxide and 0.6% dimethyl aniline a complete hardening was attained only after repeated heating. Dilatometric curves of the following glass reinforced plastics were also taken: 1) 30%

Study of the Completeness of Hardening of Unsaturated Polyester Resins by the Dilatometric Method

S/191/60/000/010/015/017
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phenol formaldehyde resin with 70% epoxy resin and glass reglet; 2) polyester resin with glass reglet; 3) polyester resin with glass fabric; 4) polyester resin with glass mat. The hysteresis of heating and cooling curves showed that in all specimens hardening was incomplete. There are 8 figures, 4 tables, and 6 references: 2 Soviet, 2 US, and 2 German.

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GIL'MAN, T.P.; PERLIN, S.M.; LEYTES, A.Z.

Electro consistometer for determining the processing time, gelatinization, and hardening of resins. Plast.massy no.11:68-71 '60.
(MIRA 13:12)

(Resins, Synthetic)

ZUBOV, P.I.; LEPILKINA, L.A.; GIL'MAN, T.P.; LEYTES, A.Z.

Internal stresses during hardening of polyester resins.
Koll.zhur. 23 no.5:563-567 S-O '61. (MIRA 14:9)

1. Institut fizicheskoy khimii AN SSSR, Otdel polimerov.
(Resins, Synthetic--Testing) (Esters)

S/653/61/000/000/034/051
I007/I207

AUTHORS: Perlin, S.M., Gil'man, T.P., and Leytes, A.Z.

TITLE: Determination of hardening degree of unsaturated polyester resins by the dilatometric method

SOURCE: Plastmassy v mashinostroyenii i priborostroyenii. Pervaya resp. nauch.-tekh. konfer. po vopr. prim. plastmass v mashinostr. i priborostr., Kiev, 1959. Kiev, Gostekhizdat, 1961, 367-375

TEXT: The paper presents results of dilatometric determinations of series of physicomechanical properties of polyester resins by means of the differential dilatometer of the Chevenard system which yields much better results than conventional dilatometers. As was found, hardness, water-absorption and bending strength depend on the hardening degree of the resin. The dilatometric method permits suit-

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S/653/61/000/000/034/051
I007/I207

Determination of hardening degree...

able evaluation of the hardening degree of the above resins; it makes it also possible to distinguish between the temporary incomplete hardening and the constant incomplete hardening. The above method may also be successfully used for the determination of the hardening degree of glass-reinforced plastics, of their dimensional stability and heat resistance. There are 7 figures.

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LEYTES, B. G.

"Perforation of the Nasal Wall in Serious Maligant Infantile Rhumantism, " Pediatrics, No. 3. 1949. Cand. Med. Sci.

LEYTES, B.G.

Children-Diseases

Basic pronciples in the organization of prevention and control of rheumatic diseases in children. Pediatriia, No.4, 1952

9. Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

LEYTES, B.G.

LEYTES, B.G., dotsent

Effect of certain environmental factors on the course of rheumatism in children. Pediatriia no.6:35-41 N-D '54. (MLRA 8:4)

1. Iz kliniki detskikh bolezney Severo-Osetinskogo med. inst.
(RHEUMATISM, in infant and child
eff. of environment)
(ENVIRONMENT
eff. on rheumatism in inf. and child.)

LEYTES, B.G., prof.

Plenary session of the All-Union Society for the Study of Rheumatic Fever and Diseases of the Joints. Pediatriia 37 no.11:90-93 N '59. (MIRA 13:3)

(JOINTS--DISEASES)

LEYTES, B.G., prof.

Incidence of rheumatism among children of school age. Pediatriia no.8:11-15 '61. (MIRA 14:9)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Nesterov)
(RHEUMATIC FEVER)

EDEL'MAN, Z.I.; LEYTES, B.G.

First All-Russian Conference on Research and Practice of Pediatricians and Teachers on the Sanatorium and Health Resort Treatment of Children. Vop.okh.mat.i det. 7 no.8:87-89 Ag '62. (MIRA 15:9)

(TERAPEUTICS, PHYSIOLOGICAL--CONGRESSES) (CHILDREN--DISEASES)

LEYTES, B.G., prof.

Orel Province Rheumatological Conference. Vop.revm. 1 no.2:90 Ap-Je '61. (MIRA 16:4)
(RHEUMATIC FEVER--CONGRESSES)

LEYTES, B.G., prof.

Organization of school classes for children with rheumatism. Vop. okhr. mat. i det. 6 no.6:48-53 Je '61. (MIRA 15:7)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Nesterov).

(RHEUMATIC FEVER)

LEYTES, B.G., prof.; BOLOTINA, A. Yu.

Out-of-town ten-day courses as a form of improvement of the qualifications of rheumatologists. Vop. revm. 2 no.2:78-79 Ap-Je'62 (MIRA 17:3)

NEPRYAKHIN, G.G.; LEYTES, B.G.

Case of defective development of the large vessels of the heart. Khirurgiia 36 no.3:115-117 Mr '60. (MIRA 13:12)
(CORONARY VESSELS—ABNORMITIES AND DEFORMITIES)

LEYTES, D. S.

DENTISTRY - STUDY AND TEACHING

Increasing the skill of stomatologists and dentists. Stomatologiia, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

LEYTES, D.S.

N.Ya. Trakhtman; obituary. Stomatologiia 35 no.4:64 Jl-Ag '56 (MLRA 10:4)

(TRAKHTMAN, NAUM IAKOVLEVICH, 1872-1956)

LEYTES, F.L.

Cysticercoid bacillary leptomeningitis. Arkh.pat., Moskva 12 no.2: 89-91 Mar-Apr 50. (CLML 19:4)

1. Of the student scientific circle (supervised by Prof. A.I.Strukov) of the Department of Pathological Anatomy (Head -- Academician A.I. Abrikosov) of the First Moscow Order of Lenin Medical Institute, Moscow.

LEYTES, F. L.

"Pathological Anatomical Changes in the Myocardium in Severe Forms of Influenza." Sub 11 Dec 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

LEYTES, F.L.

Pathologic and anatomic modification of the myocardium and of the intracardiac nervous system in severe forms of influenza. Arkh. pat., Moskva 15 no.5:30-37 Sept-Oct 1953. (CIML 25:4)

1. Of the Laboratory of the Pathological Anatomy of Children's and Infectious Diseases (Head -- M. A. Skvortsov, Active Member AMS USSR) of the Institute of Normal and Pathological Morphology of the Academy of Medical Sciences USSR.

Investigations were made in 34 cases of virus influenza with a brief and severe clinical course; experiments were made on mice in addition. No 'influenzal myocarditis' was observed, but dystrophic and necrobiotic changes were invariably found in the intracardiac nervous system and in the myocardium (most marked on the right); this was confirmed by animal experiments. Staining tests for mucoid substances were negative; no neoformation of argyrophil and collagenous fibres were observed. Capillaries were filled with blood; stasis and small effusions of blood were frequently seen. Micronodular endothelial proliferation was occasionally observed. Brandt - Berlin

SO: Excerpta Medica
Section V
Vol. 7 No. 10

LEYTES, F.L., kandidat meditsinskikh nauk

Periarteritis nodosa appearing during the treatment of syphilis. Vest.ven. i derm. no.3:49-50 My-Je '56. (MLRA 9:9)

1. Iz patologoanatomicheskogo otdeleniya Moskovskoy gorodskoy bol'nitsy No.12.

(SYPHILIS, complications,
periarteritis nodosa (Rus))
(PERIARTERITIS NODOSA, complications,
syphilis (Rus))

EXCERPTA MEDICA Sec.8 Vol.11/5 Neuro-Psychiat.May 58

LEYTES, F.L.

2205. ANGIOMAS OF THE BRAIN CAUSING SUDDEN DEATH IN CHILDREN (Russian text) - Leites F.L. - ARKH.PATOL. 1957, 19/5 (61-63)

Angiomas of the brain result from abnormal vascular development during the embryonal period and, hence, represent congenital tumours; however, they may not produce symptoms until late in life. Five deaths from this lesion in children aged 10 to 15 yr. are reported. In all cases death had been caused by haemorrhage from the angioma; in one case the haemorrhage occurred during sleep, while in the others relatively mild trauma or exertion preceded the fatal episode. In all cases the angiomas were located in the cerebral hemispheres. This differentiates them from angio-endotheliomas which are usually found in the cerebellum. The author stresses that it may not be possible to recognize this type of lesion grossly and that, from a medico-legal standpoint, it is important to examine the brain microscopically in all instances of cerebral haemorrhage following a minor trauma.

Wilson - Dearborn, Mich. (V, 7, 8, 16)

LEYTES, F.L.

Radiological conference devoted to the 40th anniversary of the Great October Socialis Revolution, Leningrad, November 1957. Med.rad. 3 no.4:97-99 Jl-Ag '58. (MIRA 12:3)
(RADIATION SICKNESS)

LEYTES, F.L.

All-institute conference of young scientists devoted to the 40th anniversary of the Great October Socialist Revolution. Vop.kur.fizioter. i lech. fiz.kul't. 23 no.4:378-380 Jl-Ag '58
(HEALTH RESORTS, WATERING PLACES, ETC.)

KOTOV, [redacted] G.; LEYTES, F.L.

Pathogenesis of disorders in the physical development of children. Trudy mol. nauch. sotr. MONIKI no.1:101-106 '59
(MIRA 16:11)

1. Iz pediatricheskoy kliniki (zav. prof. M.I.Olevskiy) i laboratorii oblastnoy sudebno-meditsinskoy ekspertizy (zav. A.I.Dodina) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni Vladimirskogo

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LEYTES, F.L.; RUZER, L.S. (Moskva)

Pathoanatomical changes of the internal organs following radon inhalation under experimental conditions [with summary in English]. Arkh.pat. 21 no.1:20-28 '59. (MIRA 12:1)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) Tsentral'nogo instituta kurortologii (dir. - kand. med. nauk G.N. Pospelova).

(RADIUM, effects,
radon inhalation, histopathol. of internal organs in white rats (Rus))

LEYTES, F.L.

Morphological changes in the skin during external X- irradiation. Biul.eksp.biol.i med. 48 no.11:113-116 N '59. (MIRA 13:5)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) Gosudarstvennogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii (dir. G.N. Pospelova), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR I.G. Rufanovym.
(SKIN radiation eff.)

17(1,10) SOV/20-128-2-50/59

AUTHOR : Leytes, F. L.

TITLE: On the Effect of α-Radiation on the Prolific Function of the Epidermis

PERIODICAL: Doklady Akademii nauk SSSR,1959,Vol 128, Nr 2,pp 400-403 (USSR)

ABSTRACT: V. G. Garshin and M. A. Zakhar'yevskaya (Ref 1) proved that an epidermis stimulated to proliferation seems to be insensitive to high doses of X-ray irradiation. It shows a marked proliferation and no characteristic phenomena of dystrophy. These data were in contradiction to the law of Bergonie and Tribondeau (Ref 10). The mentioned experiments were repeated by L. V. Funshteyn (Refs 2,3), Z. I. Kryukova (Refs 4,5), I. F. Prizhivoyt (Ref 6) et al and the data of reference 1 were confirmed and defined. The rules observed proved to hold also for $\gamma$- radiation of $Co^{60}$ and for $\beta$-radiation of radioactive phosphorus and strontium. The experiment with α-rays carried out upon recommendation of Professor L. V. Funshteyn is then described. 17 rabbits were used for this experiment.So-called radioactive bandages applied to shaved places on their back and kept there during 20 hours. They contained decay products of thoron: thorium B,C,$C^{I}$ and $C^{II}$. 90% of the radiation energy of these isotopes consisted of α-rays absorbed by the tissue.

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The isotopes themselves do not penetrate into the skin (Ref 1o). Skin biopsies were made: during the first week daily, then every 3rd - 4th day. Part of the experimental animals was killed 1 day to 3-4 months after the irradiation and the skin as well as the internal organs were histologically investigated. Figure 1 shows the proliferation of the epidermis and of the follicular epithelium in stimulation. Figure 2 shows a violent development of the irradiation damage in an α-irradiated and stimulated epidermis. The author arrived at the following conclusions: 1) the tissue of the epidermis stimulated to proliferation by the extract of the Naftalanskaya petroleum is not entirely resistant to α-irradiation. A focus-like or almost complete dystrophy of the cells of the thorn-shaped layer occurred in a zone accessible to the action of an external α-irradiation. 2) In a stimulation of the epidermis to proliferation which is made after the irradiation a violent development of radiation damage takes place (in contrast to other types of irradiation) compared to a "resting" epidermis. 3) The phenomenon described in point 2) confirms (from the author's point of view) the principle that damage of the cells takes place on the whole

in the mitosis phase and is more or less connected with the disturbance of the mechanism of cell division. 4) Subsequently to the violent development of the radiation damage an accelerated tissue regeneration takes place in the stimulation of the epidermis. This indicates a favorable effect of the stimulation which contributes to the elimination of this damage. This opens new prospects of healing. 5) The characteristics of the reaction of the epidermis to α-irradiation are apparently due to the specific properties of the α-rays. There are 2 figures and 1o references, 9 of which are Soviet.

ASSOCIATION: Gosudarstvennyy institut kurortologii i fizioterapii (State Institute of Balneology and Physiotherapy)

PRESENTED: April 15, 1959, by A. N. Bakulev, Academician

SUBMITTED: April 8, 1959

LEYTES, F. L.

"The Influence of Small Doses of Toal Alpha-Irradiation on Certain Histochemical Indices of the Hormonal Activity of Cells of the Adrenal Cortex."

report submitted for the First Conference on the problems of Cyto and Histochemistry, Moscow, 19-21 Dec 1960.

**Radiological Laboratory of the State Institute of the Science Dealing with Health Resorts and of Physiotherapy, Moscow.**

LEYTES, F.L.

Fatal complication in antibiotic therapy for a diabetic patient.
Probl. endok. i gorm. 6 no. 4:72-77 Jl-Ag '60. (MIRA 14:1)
(PENICILLIN) (DIABETES) (MONILIASIS)

ARDASHNIKOV, S. N.; LEYTES, F. L.; RAYT, M. L.

Role of $\alpha$-rays in the activity of radioactive bandages on the skin. Vest. derm. i ven. 34 no.1:29-35 Ja '60.

(MIRA 14:12)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye. S. Shchepot'yeva) TSentral'nogo instituta kurortologii (dir. G. N. Pospelova).

(ALPHA RAYS—THERAPEUTIC USE)
(SKIN—DISEASES)

LEYTES, F.L., kand.med.nauk

Effect of X-ray therapy with thoron fission products on the course of experimental dermatitis. Vest.derm.i ven. 35 no.3:12-15 Mr '61. (MIRA 14:4)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) Nauchno-issledovatel'skogo instituta kurortologii i fizioterapii (dir. - kand.med.nauk G.N. Pospelova).
(SKIN--DISEASES) (RADON--THERAPEUTIC USE)

LEYTES, F.L. (Moskva)

Histochemical analysis of polysaccharides in myocardial stroma in influenza. Arkh.pat. 23 no.5:45-51 '61. (MIRA 14:6)

1. Iz patologoanatomicheskogo otdeleniya (zav. - kand.med.nauk F.L. Leytes) Moskovskoy gorodskoy bol'nitsy No. 58 (glavnyy vrach - dotsent Ye.Ya. Khesin).
(INFLUENZA) (HEART--MUSCLE) (POLYSACCARIDES)

LEYTES, F.L.; RUZER, L.S.

Morphological and dosimetric investigations following the experimental introduction of radon water into the gastrointestinal tract. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.1:13-22 '61. (MIRA 14:5)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S.Shchepot'yeva) TSentral'nogo instituta kurortologii (dir. - kandidat meditsinskikh nauk G.N.Pospelova).

(DIGESTIVE ORGANS) (RADON—PHYSIOLOGICAL EFFECT)

LEYTES, F.L.; FUNSHTEYN, L.V.

Effect of Naftalan petroleum extract on changes in the epidermis after local $\alpha$-irradiation. Biul. eksp. biol. i med. 51 no.3: 121-125 Mr '61. (MIRA 14:5)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii i TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii, Leningrad. Predstavlena deystvitel'nym chlenom AMN SSSR I.G.Rufanovym.

(SKIN) (PETROLEUM--THERAPEUTIC USE)
(ALPHA RAYS--PHYSIOLOGICAL EFFECT)

LEYTES, F.L.

Symposium on radon therapy. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.3:277-280 My-Je '61. (MIRA 14:7)
(RADON—THERAPEUTIC USE)

LEYTES, F.L.

Effect of total-body alpha irradiation on hormonal activity of the adrenal cortex. Med.rad. no.6:73-77 '61. (MIRA 15:1)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'-yeva) Gosudarstvennogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii.
(ALPHA RAYS—PHYSIOLOGICAL EFFECT) (ADRENAL CORTEX—RADIOTHERAPY)

LEYTES, F.L.; SKURIKHINA, L.A.

Effect of microwaves on the hormonal activity of the adrenal cortex. Biul. eksp. biol. i med. 52 no.12:47-50 D '61. (MIRA 14:12)

1. Iz TSentral'nogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii (dir. G.N.Pospelova) Ministerstva zdravookhraneniya SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.A. Krayevskim.

(ADRENAL CORTEX) (MICROWAVES—PHYSIOLOGICAL EFFECT)

SERGEYEV, Nikolay Vasil'yevich [deceased]; LEYTES, Faina L'vovna; SHTUTSER, N.V., red.; BALDINA, N.F., tekhn.red.

[Lesions of the cardiovascular system in influenza] Porazhenie serdechno-sosudistoi sistemy pri grippe. Moskva, Medgiz, 1962. 163 p. (MIRA 15:5)
( INFLUENZA) (CARDIOVASCULAR SYSTEM--DISEASES)

SERGEYEV, N.V.; LEYTES, F.L.

Some results of the study of circulatory disorders in influenza. Vest. AMN SSSR 17 no.2:15-22 '62. (MIRA 15:3)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR.
(INFLUENZA)
(BLOOD--CIRCULATION, DISORDERS OF)

LEYTES, F.L.

Effect of general alpha ray therapy (administration into the stomach of radon water) on disordered lipid metabolism in an experiment. Med.rad. no.3:45-53 '62. (MIRA 15:3)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'-yeva) TSentral'nogo instituta kurortologii i fizioterapii.
(LIPID METABOLISM) (RADON) (ALPHA RAYS)

LEYTES, F.L., kand.med.nauk

Significance of a deficiency of tissue lipolytic enzymes in the pathogenesis of atherosclerosis. Kardiologiia 2 no.4:35-41 Jl-Ag '62. (MIRA 15:9)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S.Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii (dir. - kand.med.nauk G.N.Pospelova).
(ARTERIOSCLEROSIS) (LIPASE) (ESTERASES)

LEYTES, F.I. (Moskva)

Method for the induction of experimental atherosclerosis in rats. Pat. fiziol. i eksp. terap. 6 no.4:84-86 Jl-Ag '62. (MIRA 17:8)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii.

LEYTES, F.L.

Histochemical characteristics of carbohydrate metabolism in experimental hypothyroidism. Biul. eksp. biol. i med. 53 no.5:50-55 My '62. (MIRA 15:7)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii Ministerstva zdravookhraneniya SSSR (dir. - kand. med. nauk G.N. Pospelova), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR I.G. Rufanovym.
(POLYSACCHARIDES) (THYROID GLAND--DISEASES)

LEYTES, F. L., kand. med. nauk; LEMPERT, B. L.; V'YUROVA, Z. D.

Case of aortic aneurysm in Marfan's syndrome. Terap. 34 no.1: 106-109 '62. (MIRA 15:7)

1. Iz Moskovskoy rogodskoy bol'nitsy No. 58 (glavnyy vrach - dotsent Ye. Ya. Khesin)

(ARACHNODACTYLY) (AORTIC ANEURYSMS)

LEMPERT, B.L.; LEYTES, F.L.

Role of the reduction of the lipolytic activity of the aortic wall in the pathogenesis of its lipoid infiltration. Biul. eksp. biol. i med. 55 / i.e. 56/ no.10:25-29 O'63 (MIRA 17:8)

1. Iz kafedry patologicheskoy fiziologii ( zav. - prof. S.M.Leytes) TSentral'nogo instituta usovershenstvovaniya vrachey i TSentral'nogo instituta kurortologii i fizioterapii ( dir. G.N. Pospelova). Predstavlena deystvitel'nym chlenom AMN SSSR V.Kh.Vasilenko.

LEYTES, F.L. (Moskva)

Changes in nonspecific esterase activity during experimental disorders of lipid metabolism. Pat.fiziol. i eksp. terap. 7 no.2:50-54 Mr-Ap'63. (MIRA 16:10)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii.
(ESTERASES) (LIPID METABOLISM)

LEYTES, F.L.

Effect of general alpha therapy on lipoid metabolism in experimental atherosclerosis. Med. rad. 8 no.7:62-67 Jl '63. (MIRA 17:1)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii.

L 18084-63 EWT(l)/EWT(m)/BDS/ES(j) AMD/AFFTC/ASD AR/K

ACCESSION NR: AP3005691 S/0241/63/008/008/0054/0058

58
56

AUTHOR: Leytes, F. L. 14

TITLE: Effect of total body alpha irradiation on lipolytic enzyme induction by the connective tissue cells

SOURCE: Meditsinskaya radiologiya, v. 8, no. 8, 1963, 54-58

TOPIC TAGS: alpha irradiation, radon water, lipolytic enzyme, cholesterol, connective tissue, esterase, lipase

ABSTRACT: Twenty rats divided in two groups were alpha irradiated by radon water to determine the effect of such radiation on the utilization of the lipolytic enzymes by the cholesterol granuloma cells. 0.01 microcurie of radon water was administered to the first group for a month, and .005 microcuries was administered to the second group for the same period. The radiation dose absorbed was the biological equivalent of 0.25 rads for the first group and 0.125 rads for the second group. All the animals were injected with 100 mg of chemically pure cholesterol in the form of a thin suspension in a physiological solution the day before irradiation was started. After irradiation was completed the animals were killed. The cholesterol

Card 1/2

L 18084-63
ACCESSION NR: AP3005691

granuloma cells were removed from the animals during autopsy. Polarization microscopy and various reaction tests were used for histological investigations of the cholesterol granuloma tissues. A count was made of the giant cells and histiocytes filled with the lipase enzyme to determine the number of cells containing lipase and highly active esterase. All the investigation results for the first and second groups show that absorbed alpha irradiation has a significantly stimulating effect on the induction of the lipolytic enzymes, both lipase and nonspecific esterase, by the cholesterol granuloma cells. This study confirms the beneficial effect of alpha therapy on lipoid metabolism. Orig. art. has: 4 figures.

ASSOCIATION: Radiologicheskaya laboratoriya Tsentral'nogo instituta kurortologii i fizioterapii (Radiology Laboratory - Professor Ye. S. Shchepot'yev, Director- Central Institute of Health Resort Treatments and Physiotherapy)

SUBMITTED: 28Feb63 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: AM NO REF SOV: 000 OTHER: 000

Card 2/2

LEYTES, F.L., kand. med. nauk (Moskva)

Induction of lipolytic enzymes in connective tissue cells following change in endocrine gland function under experimental conditions. Probl. endok. i gorm. 9 no.6:29-33 N-D '63.

(MIRA 17:11)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shepot'yeva) TSentral'nogo instituta kurortologii i fizicterapii (dir. - kand. med. nauk G.N. Pospelova).

LEYTES, F.L.

Role of lipolytic enzymes in the pathogenesis and pathology of atherosclerosis. Vestn. Akad. med. nauk SSSR 18 no.7: 37-42 '63 (MIRA 17:2)

1. TSentral'nyy institut kurortologii i fizioterapii Ministerstva zdravookhraneniya SSSR.

LEYTES, F.L.

Changes in the activity of lipolytic enzymes in feeding animal and vegetable fats to rats. Vop. pit. 22 no.6:37-43 N-D '63. (MIRA 17:7)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii, Moskva.

LEYTES, F.L. (Moskva)

Changes in the activity of lipolytic enzymes in atherosclerosis. Arkh. Pat. 25 no.6:27-33 '63. (MIRA 17:1)

1. Iz Instituta morfologii cheloveka (dir. - chlen-korrespondent AMN SSSR prof. A.P. Avtsyn) AMN SSSR i radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii (dir. - kand. med. nauk G.N. Pospelova).

LEYTES, F.L.

Histochemical characteristics of lipid metabolism and lipolytic activity in aged animals. Biul. eksp. biol. i med. 55 no.4:114-118 Ap '63. (MIRA 17:10)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii (dir. - kand. med. nauk G.N. Pospelova), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR I.T. Rufanovym.

LEYTES, F.L.

Morphological characteristics of experimental arteriosclerosis in white rats. Dokl. AN SSSR 153 no.1:190-193 N '63. (MIRA 17:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut kurortologii i fizioterapii. Predstavleno akademikom A.N. Bakulevym.

LEYTES, F.L.

Lesions of the coronary arteries of the heart in recurrent states of tension (stress). Pat. fiziol. i eksp. terap. 8 no.5:27-31 S-O '64. (MIRA 18:12)

1. Radiologicheskaya laboratoriya (zav. - prof. Ye.S.Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii, Moskva. Submitted March 4, 1963.

LEYTES, F.L.; GOLOSOVSKAYA, M.A.

Distribution of lipolytic enzymes in the walls of different human vessels. Dokl. AN SSSR 156 no. 4:941-944 Je '64.
(MIRA 17:6)

1. TSentral'nyy institut kurortologii i fizioterapii i Gorodskaya bol'nitsa No. 58, Moskva. Predstavleno akademikom A.N.Bakulevym.

LEYTES, F.L.

Effect of radon baths on the regeneration of the peripheral nerves. Vop. kur., fizioter. i lech. fiz. kul't. 29 no.4:322-326 Jl-Ag '64. (MIRA 18:9)

1. Radiologicheskaya laboratoriya (zav. - prof. Ye.S.Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii (dir. - kand. med. nauk G.N.Pospelova), Moskva.

LEYTES, F.L.; LEMPERT, B.L.

Localization of lipoproteinic lipase in some tissues of white rats. Dokl. AN SSSR 157 no.3:672-673 Jl '64. (MIRA 17:7)

1. TSentral'nyy institut usovershenstvovaniya vrachey i TSentral'nyy institut kurortologii i fizioterapii. Predstavleno akademikom A.N. Bakulevym.

LEYTES, F.L., prof.; LEMPERT, B.L.

Histochemical method for the detection of lipoprotein lipase enzyme. Biul. eksp. biol. i med. 60 no.7:123-125 Jl '65. (MIRA 18:8)

1. Kafedra patologicheskoy fiziologii (zav.- prof. S.M. Leytes) TSentral'nogo instituta usovershenstvovaniya vrachey i TSentral'nyy institut kurortologii i fizioterapii (direktor - kand. med. nauk G.N. Pospelova), Moskva.

LEYTES, F.L.

Activity of lipoprotein lipase and other lipolytic enzymes in experimental atherosclerosis in rabbits. Pat. fiziol. i eksp. terap. 9 no.2:12-17 Mr-Ap '65. (MIRA 18:5)

1. Radiologicheskaya laboratoriya (zav. - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii, Moskva.

LEYTES, F.L. (Moskva)

Lipoprotein lipase. Usp. sovr. biol. 59 no.2:226-245 Mr-Ap '65. (MIRA 18:4)

FREYDIN, Kh.M.; LEYTES, F.L.

Effect of sodium chloride baths on the function of the hypophysial-adrenal system. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.4:300-303 Jl-Ag '65. (MIRA 18:9)

1. Bal'neoterapevticheskiy otdel (zav.- prof. Kh.M. Freydin) i Radiologicheskaya laboratoriya (zav.- prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii i fizioterapii (dir. G.N. Pospelova), Moskva.

LEYTES, F.L.

Topography of lipolytic enzymes at various stages of the evolution of atherosclerotic patches. Dokl. AN SSSR 165 no.5:1175-1178 D '65. (MIRA 19:1)

1. Submitted February 4, 1965.

LEYTES, I.D., inzhener.

Concerning N.P. Titkov's article "Selection of the number and amplitude of piston vibrations in jigging." TSvet. met. 26 no.2: 75-76 Mr-Ap '53. (MLRA 10:9)
(Ore dressing) (Titkov, N.P.)

57-28-6-17/34

AUTHORS: Torocheshnikov, N. S., Leytes, I. L., Brodyanskiy, V. M.

TITLE: Investigation of the Effect of the Temperature Subdivision of Air in the Direct-Flow Turbulence Tube (Issledovaniye effekta temperaturnogo razdeleniya vozdukha v pryamotochnoy vikhrevoy trube)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 6, pp. 1229 - 1236 (USSR)

ABSTRACT: The effect produced by a turbulent temperature subdivision of gases, which was discovered by Ranque (Reference 1), usually takes place in the counterflow turbulence tube (figure 1a). The effect of the turbulent subdivision of gases caused considerable interest among research workers, both on account of its apparently paradoxical character and because of the possibility of applying it in refrigeration technology. Cooling of the gas in the turbulence tube is considerably more intense than in the case of the chocking effect of the flow. In the course of the present work the effect produced by the direct-flow turbulence tube was studied, and, at the same time, the hypothesis

of turbulence variation was checked. In the course of experiments carried out with a direct-flow tube the dependence of the cooling effect on the point where the cold fraction is taken off along the length of the tube, was carefully studied. Also the influence exercised by the cold-air portion upon the process of temperature-subdivision was investigated. The results obtained in no way differ qualitatively from the indices of the counterflow tube, which change according to the same dependences. Although the experiments were carried out under the same conditions, it nevertheless remained unexplained by what the decrease of efficacy in the direct-flow tube as compared with that in the counterflow tube was caused. It turned out that the direct-flow tube is, in principle, of unfavorable construction. As is shown (figure 4) the efficacy of the direct-flow construction is greater in the case of an increase of from 1 to 3 ÷ 4 than that of the counterflow tube, conditions otherwise being the same. The results obtained by these two types of tubes are shown (table 2). Constructional inter-







relations must be found experimentally for each type of tube. The same is the case also with the interrelation of air consumption. The authors also calculated the thermodynamical efficacy of counterflow turbulence tubes for different $\mu$. All existing hypotheses concerning the nature of the turbulence effect agree that its amount depends basically upon the velocity with which the gas is discharged from the ejector nozzle into the tube. Higher pressure before the nozzle leads to a certain increase of the velocity with which the gas is discharged from the nozzle. Nevertheless the increase of velocity in the supersonic range is not proportional to pressure

Investigation of the Effect of the Temperature Subdivision of Air in the Direct-Flow Turbulence Tube 57-28-6-17/34

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut (Moscow Chemical-Technological Institute)

SUBMITTED: July 1, 1957

1. Turbulent flow—Theory 2. Gases—Testing equipment
3. Gases—Pressure 4. Gases—Temperature factors

Card 4/4

S/170/60/003/012/009/015
B019/B056

11.9720

AUTHORS: Brodyanskiy, V. M., Leytes, I. L.

TITLE: The Temperature Gradient in a Ranque-Hilsch Tube

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 12, pp. 72-77

TEXT: The vortex tube schematically shown in Fig. 1a has first been described by Hilsch and Ranque. In this tube a helical flow is produced through a tangentially applied nozzle, which moves in the direction of choke 5. A part of this helical flow changes its direction and leaves the tube through diaphragm 2 with reduced temperature and enters cooling tube 4. Some papers dealing with the cooling effect of this tube are discussed at length. It is stated that, owing to the complicated events, no exact explanation is possible. On the basis of experimental data, a formula is then suggested for the technical calculation of the cooling effect:

$$\Delta T_{cool} = (U_e^2 - U_i^2)A/2gc_p \quad (1).$$

Here $U_e$ and $U_i$ are the mean outer and inner flow rates passing through the diaphragm. The influence

The Temperature Gradient in a Ranque-Hilsch Tube

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B019/B056

exerted by the initial temperature, by the diaphragm-diameter, and by the part played by pressure in the nozzle is investigated, and several examples of calculations are discussed. The authors thank Professor A. A. Gukhman and Professor Ye. Ya. Sokolov for valuable advice. There are 2 figures, 1 table, and 18 references: 9 Soviet.

ASSOCIATION: Energeticheskiy institut, g. Moskva (Institute of Power Engineering, Moscow)

SUBMITTED: July 13, 1960

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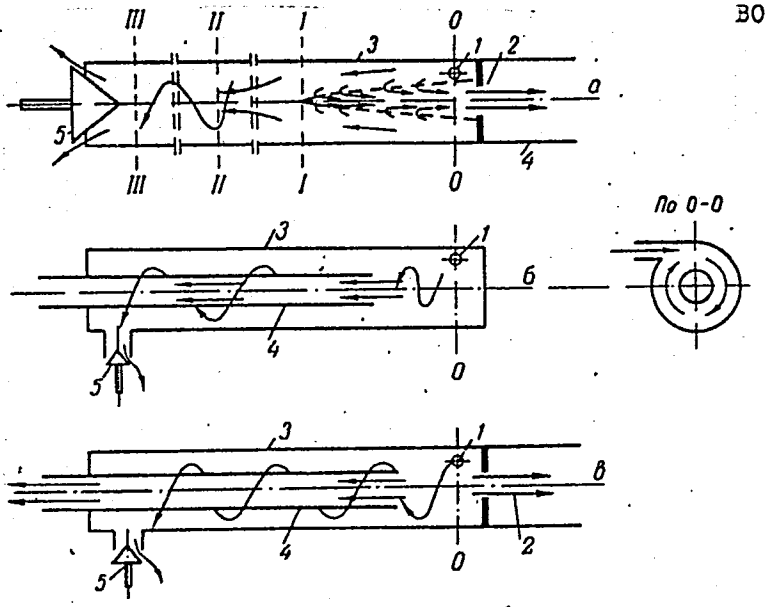
B019/B056




Card 3/3

Рис. 1. Схемы вихревых труб:

BRAUDE, G.Ye; LEYTES, I.L.; DEDOVA, I.V.

Solubility of acetylene, carbon dioxide, and higher acelylenic hydrocarbons in the system dimethylformamide - water. Khim.prom. no.4:232-235 Ap '61. (MIRA 14:4)
(Acetylene) (Carbon dioxide) (Formamide)

36860
S/170/62/005/005/005/015
B104/B102

5.4100

AUTHORS: Brodyanskiy, V. M., Leytes, I. L.

TITLE: The dependence of the Rank effect on properties of real gases

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 5, 1962, 38-41

TEXT: In a previous paper (IFZh, no. 12, 72, 1960) the authors derived a formula for the cooling in a vortex tube: $\Delta T = (u_c^2 - u_\tau^2 - u_a^2)A/2gc_p$. The mean velocity $u_c$ of the outflow from the nozzle, the mean axial velocity $u_a$ of the internal flow and the mean tangential velocity $u_\tau$ depend on pressure and temperature outside the nozzle, the proportion of cold gas and the tube parameters. Data obtained by K. Elser et al. (Z. f. Naturforschung, 6a, 25, 1931) in regard to air, $H_2$, Ar, $CH_4$ and $CO_2$ are compared with calculations based on the above formula which well represents the dependence of the Rank effect on the gas properties (maximum divergence 10%). The thermal effect of a real gas is calculated

Card 1/2

LEYTES, I.L.; IVANOVSKIY, F.P.

Solubility of gases in mixtures on nonelectrolytes. Khim.prom. no.9:653-657 S '62. (MIRA 15:11)

(Gases) (Solubility)

L 10692-63

ACCESSION NR: AP3001612 S/0064/63/000/004/0032/0036 44

AUTHOR: Brodyanskiy, V. M.; Leytes, I. L.; Martynov, A. V.; Semenov, V. P.; Estrin, S. M.

TITLE: Application of vortex effect in chemical engineering

SOURCE: Khimicheskaya promyshlennost', no. 4, 1963, 32-36

TOPIC TAGS: vortex effect, vortex tube

ABSTRACT: A survey of what has been done up to now with respect to the application of the vortex effect in chemical engineering. Authors define vortex effect as the division of gas into cold and hot flows during its expansion in the vortex tube. Various types of vortex tubes are discussed. Authors made a number of tests wherein they checked the characteristics of a vortex tube at different pressures under production-line conditions. This tube had a 40 mm diameter, two right-angled nozzles with spiral inlets. Interchangeable diaphragms of 18, 20, and 22 mm were used. The gas temperature at the inlet was 34-40C. Gas expenditure was 840-460 normal cubic meters per hour. The results are summarized in graphs which are discussed in detail. Treatment is mathematical.

Card 1/2

BRODYANSKIY, V.M.; LEYTES, I.L.; MARTYNOV, A.V.; SEMENOV, V.P.; ESTRIN, S.M.

Use of the vortex effect in chemical technology. Khim. prom. no.4:272-276 Ap '63. (MIRA 16:8)

LEYTES, I.L., inzh.; STRIZHEVSKIY, I.I., kand.khim.nauk

Dependence of the gas absorption of cylinders on the content of impurities in acetylene. Svar.proizv. no.4:14-15 Ap '64. (MIRA 18:4)

1. Gosudarstvennyy institut azotnoy promyshlennosti.

LEYTES, I.L.; IVANOVSKIY, F.P. [deceased]

Solubility of a third component near the critical point of an equilibrium liquid - liquid of a binary solution. Zhur. fiz. khim. 39 no.6:1511-1514 Je '65. (MIRA 18:11)

1. Gosudarstvennyy institut azotnoy promyshlennosti. Submitted April 5, 1964.

LEYTES, L.A.

AUTHORS: Yegorov, Yu. P., Leytes, L. A., Mironov, V. F. 62-58-4-24/32

TITLE: Transconfiguration of 1,2-Disilylsubstituted Ethylenes (O trans-konfiguratsii 1,2-disililzameshchennykh etilenov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, 1958, Nr 4, pp. 510-512 (USSR)

ABSTRACT: In previous papers (Refs 1-3) the authors described for the first time the synthesis of 1,2-bis-(trichlorosilyl)-ethylene and 1,2-bis-(trimethylsilyl)-ethylene as well as the combination dispersion of light in the latter compounds. They also uttered the assumption that the widening of the frequency of the binary binding to 2o $cm^{-1}$ observed in this spectrum can possibly be explained by the cis-trans-isomerism. The KRS-spectrum (Ref 4) of 1,2-bis-(trichlorosilyl)-ethylene was described by Batuyev and others (spectrograph KPC-11) The authors of the present paper report that they found the IK-spectra of 1,2-bis-(trichlorosilyl)-ethylene and 1,2-bis--(trimethyl)-ethylene (within the range of from 7oo-17oo $cm^{-1}$).

Card 1/2

Transconfiguration of 1,2-Disilylsubstituted Ethylenes 62-58-4-24/32

It was reported that these molecules have centrosymmetrical transconfiguration. There are 2 figures, 2 tables, and 7 references, 5 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR (Institute for Organic Chemistry N.D. Zelinskiy, AS USSR)

SUBMITTED: November 27, 1957

AVAILABLE: Library of Congress

1. Disilylsubstituted ethylenes—Transconfigurations

Card 2/2

LEYTES, L. A.

5.3600

77855
SOV/79-30-2-6/78

AUTHORS: Petrov, A. D., Chernyshev, Yu. A., Dolgaya, M. Ye., Yegorov, Yu. P., Leytes, L. A.

TITLE: Addition of Silanes to Alkenylbenzenes in the Presence of Chloroplatinic Acid

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 376-383 (USSR)

ABSTRACT: The authors effected addition of trichlorosilane and alkyldichlorosilanes to styrene, allylbenzene, and γ-butenylbenzene by using chloroplatinic acid as a catalyst (1 ml of 0.1 M solution in isopropyl alcohol per 1.2 mole each of silane and alkenylbenzene. The reaction was performed at 30-40°, in a four-neck round-bottom flask, provided with a stirrer, reflux condenser, thermometer, and a dropping funnel (for slow and continuous addition of the alkenylbenzene). While addition of trichlorosilane results in only one product, the methyl- and ethyldichlorosilanes produce two isomers each:

Card 1/7

ASSOCIATION: Institute of Organic Chemistry of the Academy of Sciences, USSR (Institut organicheskoy khimii Akademii nauk SSSR)

SUBMITTED: March 2, 1959

Card 7/7

20940

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S/062/61/000/003/006/013
B117/B208

AUTHORS: Yegorov, Yu. P., Leytes, L. A., Tolstikova, N. G., Chernyshev, Ye. A.

TITLE: Spectroscopic investigation of the effect of the silicon atom on multiple bonds in molecules of organosilicon compounds

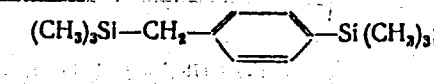
PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 3, 1961, 445-454

TEXT: The present paper continues a previous study (Ref. 1: A. D. Petrov, Yu. P. Yegorov, V. F. Mironov, G. I. Nikishin, A. A. Bugorkova, Izv. AN SSSR. Otd. khim. n. 1956, 50; Ref. 2: Yu. P. Yegorov, Ye. A. Chernyshev, Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, Izv. L'vovskogo gos. un-ta t. 1, 1957, str. 390) on physical and chemical properties of organosilicon compounds with multiple bonds in different positions to the silicon atom. In particular, some para-substituted benzene derivatives with β and γ positions of the silicon atom to the aromatic ring were studied. The Raman spectra of the following compounds were taken:

Card 1/6

IX

Spectroscopic investigation of the... S/062/61/000/003/006/013
B117/B208



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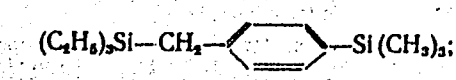

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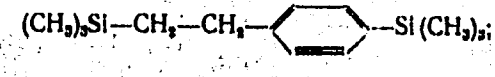

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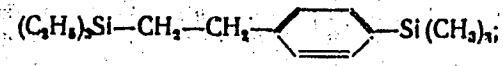

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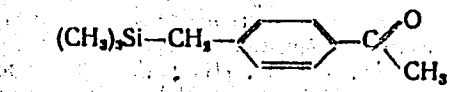

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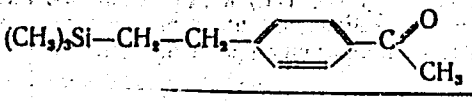
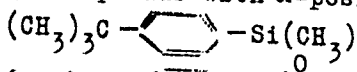


(VI)

Card 2/6

Spectroscopic investigation of the...

Furthermore, the ultrared spectra were taken of compounds (I), (III), (V), (VI), as well as of compounds with α-position of silicon to the ring



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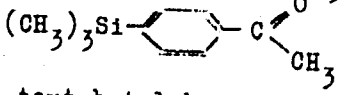

(VIII).

P-trimethyl-silyl-tert-butyl benzene was obtained from p-chloro-tert-butyl benzene and trimethyl chloro silane by the reaction of Würtz-Fittig, and p-tri-methyl-silyl-triethyl-β-phenyl-ethyl silane by the Grignard reaction. All other silicon hydrocarbons were also prepared in tetrahydrofuran under the same conditions. Properties and yields of the resultant compounds are given in Table 5. Silicon-containing aromatic ketones were obtained by a method described in Ref. 19 (Ye. A. Chernyshev, E. N. Klyukina, A. D. Petrov, Izv. AN SSSR. Otd. khim. n. 1960, 1601). The Raman spectra were taken with an ИСП-51 (ISP-51) device. The line intensity in the maximum was measured photometrically with a cyclohexane scale and by the method of the internal standard ($CCl_4$ was used as internal standard). An anomalous reactivity, as compared to compounds with α and

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γ positions of the silicon atom, was observed in compounds with β-position of the silicon atom to the ring. The intensity of the lines assigned to symmetric vibrations of the system $\rightarrow Si - C -$  $- X$ in the Raman spectrum increases. In ultraviolet spectra recorded with an SF-4 (SF-4) spectrophotometer, an increase in intensity and a bathochromic band shift is observable. The exaltation of $MR_D$ (molecular refraction) increases. In systems $\rightarrow Si - C - C = C$ and $\rightarrow Si - C -$  $- X$, a specific mutual influence between the multiple bonds or the aromatic ring and the complicated electron shell of the silicon atom in the valence state occurs. This effect is possibly enhanced by the steric configuration of the system $Si-C-C-X$. As may be seen from the models by Stuart and Briglеb,
1 2 3 4
a structure is possible in these systems with the atoms 1 and 4 located so closely that van der Waal's radii overlap each other. Conclusions on this effect in compounds of different series may be drawn only after further studies of the line intensities and chemical properties. Mention is made of Ye. A. Chernyshev, M. Ye. Dolgaya, A. D. Petrov, V. M. Tatevskiy, P. P. Shorygin, B. A. Kazanskiy, V. T. Aleksanyan. There are 2 figures, 5 tables, and 19 references: 14 Soviet-bloc and 5 non-Soviet-bloc.

S/062/61/000/003/006/013
B117/B208

Spectroscopic investigation of the...

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR)

SUBMITTED: December 1, 1959

| a ⓐ Соединение | Выход, % б ⑥ | Т. кип., °C (мм рт. ст.) в ⑪ | $n_D^{20}$ | $d_4^{20}$ |
|---|---|---|---|---|
| $(CH_3)_3Si-CH_2-C_6H_4-Si(CH_3)_3$ | 84 | 85—86 (4) | 1,4911 | 0,8681 |
| $(CH_3)_3Si-CH_2-CH_2-C_6H_4-Si(CH_3)_3$ | 80 | 110—112 (5) | 1,4788 | 0,8608 |
| $(C_2H_5)_3Si-CH_2-C_6H_4-Si(CH_3)_3$ | 71 | 130—132 (6) | 1,4990 | 0,8842 |
| $(C_2H_5)_3Si-CH_2-CH_2-C_6H_4-Si(CH_3)_3$ | 78 | 139 (3) | 1,4930 | 0,8877 |

Card 5/6 Table 5

LEYTES, L.A.; YEGOROV, Yu.P.; KOLESNIKOV, G.S.; DAVYDOVA, S.L.

Study of vibrational spectra of methacrylic acid derivatives containing the elements of the IVth group. Izv.AN SSSR.Otd.khim.nauk no.11:1976-1981 N '61. (MIRA 14:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR i Institut elementoorganicheskikh soyedineniy AN SSSR.
(Methacrylic acid--Spectra)